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REISSUE APPLICATION FEE TRANSMITTAL FORM

Docket Number (Optional)

F0375DT-US

Claims as Filed - Part 1

Claims in Patent	For	Number Filed in Reissue Application	(3) Number Extra	Small Entity		Other than a Small Entity	
				Rate	Fee	Rate	Fee
(A) 17	Total Claims (37 CFR 1.16(j))	(B) 27	**** 10	x \$ 9 =	90	or	x \$ ____ =
(C) 2	Independent Claims (37 CFR 1.16(i))	(D) 5	*3	x \$ 39 =	117		x \$ ____ =
Basic Fee (37 CFR 1.16(h))					\$380		\$ ____
Total Filing Fee					\$587	OR	\$ ____

Claims as Amended - Part 2

	(1) Claims Remaining After Amendment		(2) Highest Number Previously Paid For	(3) Extra Claims Present	Small Entity		Other than a Small Entity	
					Rate	Fee	Rate	Fee
Total Claims (37 CFR 1.16(j))	*** 27	MINUS	** 27	* = 0	x \$ 9 =	0	or	x \$ ____ =
Independent Claims (37 CFR 1.16(i))	*** 5	MINUS	***** 5	= 0	x \$ 39 =	0		x \$ ____ =
Total Additional Fee					\$ 0	OR	\$ ____	

* If the entry in (D) is less than the entry in (C), Write "0" in column 3.

** If the "Highest Number of Total Claims Previously Paid For" is less than 20, Write "20" in this space.

*** After any cancellation of claims

**** If "A" is greater than 20, use (B - A); if "A" is 20 or less, use (B - 20).

***** "Highest Number of Independent Claims Previously Paid For" or Number of Independent Claims in Patent (C).

☐ Please charge Deposit Account No. _____ in the amount of _____.
A duplicate copy of this sheet is enclosed.

☒ The Commissioner is hereby authorized to charge any additional fees under 37 CFR 1.16 or 1.17 which may be required, or credit any overpayment to Deposit Account No. 19-2042.
A duplicate copy of this sheet is enclosed.

☒ A check in the amount of \$ 587.00 to cover the filing / additional fee is enclosed.

Feb. 26, 1999
Date


Signature of Applicant, Attorney or Agent of Record

DAVID L. TARNOFF
Typed or printed name

Please type a plus sign (+) inside this box → ☐

PTO/SB/50 (4/98)
Approved for use through 09/30/2000. OMB 0651-0033
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

REISSUE PATENT APPLICATION TRANSMITTAL

Address to:

Assistant Commissioner for Patents
Box Patent Application
Washington, DC 20231

Attorney Docket No.	F0375DT-US
First Named Inventor	Harry R. Layne
Original Patent Number	5,649,391
Original Patent Issue Date (Month/Day/Year)	07/22/97
Express Mail Label No.	

APPLICATION FOR REISSUE OF:
(check applicable box)



Utility Patent



Design Patent



Plant Patent

APPLICATION ELEMENTS

- ☒ * Fee Transmittal Form (PTO/SB/56)
(Submit an original, and a duplicate for fee processing)
- ☒ Specification and Claims (amended, if appropriate)
- ☒ Drawing(s) (proposed amendments, if appropriate)
- ☒ Reissue Oath / Declaration (original or copy)
(37 C.F.R. § 1.175)(PTO/SB/51 or 52)
- Original U.S. Patent
☒ Offer to Surrender Original Patent (37 C.F.R. § 1.178)
(PTO/SB/53 or PTO/SB/54)
or
☐ Ribboned Original Patent Grant
☐ Affidavit / Declaration of Loss (PTO/SB/55)
- Original U.S. Patent currently assigned?
☒ Yes ☐ No

(If Yes, check applicable box(es))

☒ Written Consent of all Assignees (PTO/SB/53 or 54)

☒ 37 C.F.R. § 3.73(b) Statement ☒ Power of Attorney

ACCOMPANYING APPLICATION PARTS

- ☐ Foreign Priority Claim (35 U.S.C. 119)
(if applicable)
- ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations
- ☐ English Translation of Reissue Oath/Declaration
(if applicable)
- * Small Entity ☐ Statement filed in prior application,
Statement(s) ☐ Status still proper and desired
(PTO/SB/09-12)
- ☒ Preliminary Amendment
- ☒ Return Receipt Postcard (MPEP 503)
(Should be specifically itemized)
- ☒ Other: Request to Transfer
Drawings

*NOTE FOR ITEMS 1 & 10: IN ORDER TO BE ENTITLED TO PAY
SMALL ENTITY FEES, A SMALL ENTITY STATEMENT IS REQUIRED
(37 C.F.R. § 1.27), EXCEPT IF ONE FILED IN A PRIOR APPLICATION
IS RELIED UPON (37 C.F.R. § 1.28).

14. CORRESPONDENCE ADDRESS



Customer Number or Bar Code Label

(Insert Customer No. or Attach bar code label here)



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Signature		Date	2/26/99

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231.

F0375DT-US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	:	ATTN: Box Reissue
	:	
Harry R. Layne	:	Patent Art Unit: 3621
	:	
Patent No.: 5,649,391	:	Examiner: W. Glenn Edwards
	:	
Issued: July 22, 1997	:	
	:	
For: EMBEDDABLE MOUNTING DEVICE	:	
AND METHOD	:	

CONSENT OF ASSIGNEE

Assistant Commissioner of Patents
Box Reissue
United States Patent and Trademark office
Washington, D.C. 20231
Sir:

Steel Block, Inc., is now the sole owner by assignment of the above-identified Letters Patent. Steel Block, Inc. assignee of U.S. Patent No. 5,649,391 consents to the filing of this reissue application with the initial application papers for U.S. Patent No. 5,649,391 to correct an error in the original Letters Patent.

Assignee further states that the above-identified Letters Patent has not been involved in any litigation. Also, submitted herewith is an offer to surrender the original patent.

Respectfully submitted,

By:

Name: Harry R. Layne

Title: President of Steel Block, Inc.

Date: Feb. 17, 1999

**OFFER TO SURRENDER PATENT
IN REISSUE APPLICATION BY ASSIGNEE/INVENTOR**

This is part of the application for a reissue patent based on the original patent grant identified below.

Name of Patentee: Harry R. Layne

Patent Number: U.S. Patent No. 5,649,391 Date Patent Issued: July 22, 1997

Title of Invention: **EMBEDDABLE MOUNTING DEVICE AND METHOD**

I, Harry R. Layne the inventor and president of Steel Block, Inc., offer to surrender the original patent.

A certificate under 37 CFR 3.73(b) is being filed concurrently herewith.

The written consent of all assignees (Steel Block, Inc.) owning an undivided interest in the original patent is included in this application for reissue.

Signature: 

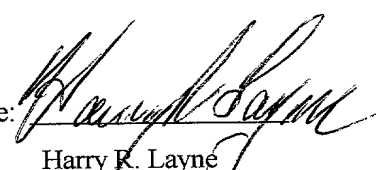
Harry R. Layne

Date: Feb. 17, 1999

The assignee owning an undivided interest in said original patent is of Steel Block, Inc and the assignee consents to the accompanying application for reissue.

The undersigned declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Name of Assignee: Steel Block, Inc

Signature of person signing for assignee: 

Harry R. Layne
President of Steel Block, Inc

Date: Feb. 17, 1999

F0375DT-US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	:	ATTN: Box Reissue
	:	
Harry R. Layne	:	Patent Art Unit: 3621
	:	
Patent No.: 5,649,391	:	Examiner: W. Glenn Edwards
	:	
Issued: July 22, 1997	:	
	:	
For: EMBEDDABLE MOUNTING DEVICE	:	
AND METHOD	:	

PRELIMINARY AMENDMENT
FOR REISSUE APPLICATION

Assistant Commissioner of Patents
Box Reissue
Washington, D.C. 20231

Sir:

Prior to examination on the merits, please amend the above-identified REISSUE application as follows.

IN THE CLAIMS:

Please add new claims 18-27 as follows:

18. An embeddable mounting device comprising:
- a first rectangular metal plate member having a first inner surface, a first outer
- surface, a first length, a first width, and a first thickness;
- a second rectangular metal plate member having a second inner surface, a second
- outer surface, a second length of a measurement equal to said first length, a second width of
- a measurement equal to said first width, and a second thickness; and

a pair of vertical spacer members secured between said first inner surface and said second inner surface in a manner to form at least one reinforcing bar and cement receiving cavity between said first and second metal plate members, in a manner to hold said first and second metal plate members in parallel relationship with each other such that when said first and second metal plate members simultaneously contact a planar surface said first and second metal plate members are both perpendicularly oriented to said planar surface, and in a manner such that said first and second outer surfaces are spaced apart a predetermined spacing distance.

19. The embeddable mounting device of claim 18, wherein said mounting device further includes a third vertical spacer member positioned between said first and second vertical spacer members to create a pair of reinforcing bar and cement receiving cavities that are alignable with said reinforcing bar and cement receiving cavities of conventional concrete blocks.

20. The embeddable mounting device of claim 18, wherein a plurality of vertical reinforcing bars are secured to said mounting device in a manner such that, when said mounting device is placed atop a first concrete block having a pair of conventional reinforcing bar and cement receiving cavities and below a second concrete block having a pair of conventional reinforcing bar and cement receiving cavities, a length of each of said plurality of vertical reinforcing bars extends into at least one of said reinforcing bar and cement receiving cavities of each of said first and second cement blocks.

21. The embeddable mounting device of claim 18, wherein
at least two threaded-connector receiving apertures are provided through one of said
first and second plate members.

22. The embeddable mounting device of claim 18, wherein
said mounting device further includes a third vertical spacer member positioned
between said first and second vertical spacer members to create a pair of reinforcing bar and
cement receiving cavities that are alignable with said reinforcing bar and cement receiving
cavities of conventional concrete blocks.

23. A method of permanently affixing a furnishing fixture to a concrete block wall
comprising the steps of:

- a) providing at least one embeddable mounting device comprising:
a first rectangular metal plate member having a first inner surface,
a first outer surface, a first length, a first width, and a first
thickness;
a second rectangular metal plate member having a second inner
surface, a second outer surface, a second length of a measurement
equal to said first length, a second width of a measurement equal
to said first width, and a second thickness; and
a pair of vertical spacer members secured between said first inner
surface and said second inner surface in a manner to form at least
one reinforcing bar and cement receiving cavity between said first
and second metal plate members, in a manner to hold said first and

second metal plate members in parallel relationship with each other such that when said first and second metal plate members simultaneously contact a planar surface said first and second metal plate members are both perpendicularly oriented to said planar surface, and in a manner such that said first and second outer surfaces are spaced apart a predetermined spacing distance;

b) installing said mounting device into said concrete block wall in place of a conventional concrete block, said mounting device being placed into said concrete block wall in a manner such that said reinforcing bar receiving cavity of said mounting device is aligned with at least one reinforcing bar receiving cavity of a said concrete block;

c) providing at least one vertical reinforcing bar that is insertable through one of said reinforcing bar receiving cavities of said concrete block and said reinforcing bar and cement receiving cavity of said mounting block;

d) inserting said at least one vertical reinforcing bar into one of said reinforcing bar receiving cavities of said concrete block and said reinforcing bar and cement receiving cavity of said mounting device;

e) providing a cementing slurry;

f) pouring said cementing slurry into said reinforcing bar receiving cavities of said concrete block and said reinforcing bar and cement receiving cavity of said mounting device;

g) waiting a period of time sufficient to allow said cementing slurry to harden;
and

h) permanently affixing a fixture to one of said plate members of said mounting device.

24. The method of claim 23 further including the steps of:

i. providing a fixture mounting bracket; and

j. permanently securing said fixture mounting bracket between one of said plate members and said fixture.

25. The method of claim 23, wherein:

said mounting device further includes a third vertical spacer member positioned between said first and second vertical spacer members to create a pair of reinforcing bar and cement receiving cavities that are alignable with said reinforcing bar and cement receiving cavities of conventional concrete blocks.

26. The method of claim 24, wherein

said mounting device further includes a plurality of vertical reinforcing bars secured to said mounting device in a manner such that, when said mounting device is placed atop a first concrete block having a pair of conventional reinforcing bar and cement receiving cavities and below a second concrete block having a pair of conventional reinforcing bar and cement receiving cavities, a length of each of said plurality of vertical reinforcing bars extends into at least one of said reinforcing bar and cement receiving cavities of each of said first and second cement blocks.

27. A method of forming a mounting device for a concrete block wall, comprising the steps of:

providing at least one embeddable mounting device comprising:

a first rectangular metal plate member having a first inner surface, a first outer surface, a first length, a first width, and a first thickness;

a second rectangular metal plate member having a second inner surface, a second outer surface, a second length of a measurement equal to said first length, a second width of a measurement equal to said first width, and a second thickness; and

a pair of vertical spacer members secured between said first inner surface and said second inner surface in a manner to form at least one reinforcing bar and cement receiving cavity between said first and second metal plate members, in a manner to hold said first and second metal plate members in parallel relationship with each other such that when said first and second metal plate members simultaneously contact a planar surface said first and second metal plate members are both perpendicularly oriented to said planar surface, and in a manner such that said first and second outer surfaces are spaced apart a predetermined spacing distance;

installing said mounting device into said concrete block wall in place of a conventional concrete block; said mounting device being placed into said concrete block wall in a manner such that said reinforcing bar receiving cavity of said mounting device is aligned with at least one reinforcing bar receiving cavity of a said concrete block;

providing a cementing slurry; and

pouring said cementing slurry into said reinforcing bar receiving cavities of said concrete block and said reinforcing bar and cement receiving cavity of said mounting device.

REMARKS

Prior to examination on the merits, please amend the above-identified REISSUE application.

Status of Claims

Currently, claims 1-27 are pending in the above-identified reissue application. Claims 1-17 are the original patent claims which remain unchanged. Claims 18-27 are new claims to be entered for the first time in this reissue application. Accordingly, after entrance of this Amendment, original patent claims 1-17 and new application claims 18-27 are pending for consideration and examination. Original patent claims 1 and 11 are independent claims. Also new application claims 18, 23 and 27 are independent claims.

Explanation of Support in the Disclosure of the Patent for the Amendments

Claim 18 is fully supported by the patent in the specification at column 6, lines 32-56 (Claim 1), and in the drawings at Figures 1 and 2.

Claim 19 is fully supported by the patent in the specification at column 6, lines 63-67, and column 7, lines 1 and 2, and in the drawings at Figure 3.

Claim 20 is fully supported by the patent in the specification at column 7, lines 3-14, and in the drawings at Figures 1 and 6.

Claim 21 is fully supported by the patent in the specification at column 7, lines 23-27, and in the drawings at Figure 3.

Claim 22 is fully supported by the patent in the specification at column 7, lines 33-39, and in the drawings at Figure 3.

Claim 23 is fully supported by the patent in the specification at column 7, lines 40-67, and column 8, lines 1-25, and in the drawings at Figures 1 and 5.

Claim 24 is fully supported by the patent in the specification at column 8, lines 26-29, and in the drawings at Figure 8.

Claim 25 is fully supported by the patent in the specification at column 8, lines 20-37, and in the drawings at Figure 3.

Claim 26 is supported by the patent in the specification at column 8, lines 37-48, and in the drawings at Figure 3.

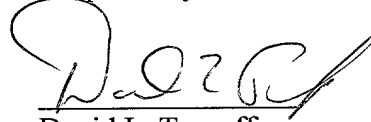
Claim 27 is fully supported by the patent in the specification at column 7, lines 40-67, and column 8, lines 1-25, and in the drawings at Figures 1, 3 and 5.

Accordingly, Applicant believes that new claims 18-27 are fully supported by U.S. Patent Number 5,649,391 and that no new matter has been added.

* * *

By the above amendments to the claims, Applicant is hereby seeking to correct an error in the issued patent. Specifically, in the issued patent the allowed claims were overly narrow and did not adequately claim the disclosed subject matter.

Respectfully submitted,



David L. Tarnoff
Attorney of Record
on Behalf of Assignee
Reg. No. 32,383

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Dated: February 26, 1999

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**EMBEDDABLE MOUNTING DEVICE AND
METHOD**

TECHNICAL FIELD

The present invention relates to devices and methods utilized to permanently install fixtures, such as a steel wall plates, a shelves, beds, cabinets, etc., to a wall in a security facility, such as a jail, prison, juvenile detention center, or psychiatric hospital, and more particularly to an embeddable wall construction unit installable within a wall in a manner to have at least one surface exposed to the surface of the wall that is suitable for forming a permanent attachment with fixtures, such as steel wall plates, beds, shelves, cabinets, etc., to anchor the fixture permanently in place, and a method of utilizing the embeddable wall construction unit for permanently securing fixtures to a concrete block wall.

BACKGROUND ART

It is a common practice within the detention industry and other public facilities, such as jails, prisons, juvenile detention centers, and psychiatric hospitals, to permanently affix certain furnishing such as the beds, cabinets, shelves, lavatories, sinks etc. and fixtures such as steel wall plates to the walls of the facility. A steel wall plate is a sheet of steel that is utilized to form or cover an existing wall to provided addition security within a detainment facility. Permanently affixing these fixtures to the walls prevents destruction of the fixtures themselves and reduces the likelihood of an inmate utilizing the fixtures as a weapon to injure a guard or cell mate. The conventional method of permanently installing these fixtures has been to form a cavity within a fully constructed wall unit, install a reinforcing bar or bars into the cavity, and then grouting the reinforcing bar(s) within the cavity using a cementing agent such as cement. A steel plate is then welded or otherwise affixed to the reinforcing bars in a manner to cover the grouted cavity opening. The steel plate acts as a mounting base to which a fixture mounting bracket, such as a length of angle iron, is welded or otherwise permanently affixed.

This method of permanently affixing fixtures to concrete block walls, masonry walls and pre-cast walls is labor intensive and leads to a degraded wall structure. In addition, the gap between the concrete block wall and the steel plate may be used to hide razor blades, knives, drugs, and other contraband articles. It would be a benefit, therefore, to have a embeddable mounting device that could be used in connection with a wall that did not provide a gap between the wall and a steel mounting surface and that forms an integral part of the wall construction. It would also be desirable to have a method for mounting a fixture permanently to a concrete block wall that did not require degrading the wall structure by forming a cavity within the preexisting wall during installation of the fixture.

**GENERAL SUMMARY DISCUSSION OF
INVENTION**

It is an object of the invention to provide a embeddable mounting device that is used in connection with a concrete block wall, a masonry wall or a pre-cast wall and that does not provide a gap between the wall and a steel mounting surface when in use.

It is a further object of the invention to provide a method of permanently mounting a fixture permanently to a wall that does not require degrading the wall structure by forming a cavity within a portion of the wall during installation of the fixture.

The first length is preferably between about eight and one-half (8½") and eight and three-quarters (8¾") inches and the first width is preferably between about sixteen and one-half (16½") and seventeen (17") inches to allow the first and second metal plate members to completely fill the space occupied by a conventional concrete block plus the area filled by the cement/grout mixture that is placed between adjacent blocks and is used to cement a plurality of the concrete blocks together to form a wall. Use of the preferably sized first and second metal plate members allows the plate members to directly contact and abut the adjacent concrete blocks located above, below, and to the sides of the mounting device in the concrete block wall within which the mounting unit is installed or embedded. Direct contact with the adjacent concrete blocks eliminates the loosening effect that can occur by the shrinking or squeezing out of the cement or grout from between the adjacent blocks and the mounting device when the mounting device is installed with a layer of cement or grout surrounding the edges of the metal plate members of the mounting device. In addition, because the concrete block is harder than the cement/grout it is more difficult to dig out around the perimeter of the exposed metal plate members to create hiding places for contraband items.

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In another aspect of the invention a method of permanently mounting furniture fixtures to a concrete block wall is provided. The method includes the step of installing a mounting device, of the type described above, into the block wall in place of one of the concrete blocks during construction of the wall. The mounting device is placed into the wall in a manner such that the reinforcing bar receiving cavity of the device is aligned with at least one reinforcing bar receiving cavity of a concrete block. A vertical reinforcing bar is then inserted into the aligned reinforcing bar receiving cavities. A cementing slurry mixture is then poured into the aligned reinforcing bar receiving cavities in a manner such that the vertical reinforcing bar and a quantity of the cementing slurry mixture fills the space between the first and second plate members of the mounting device. The cementing slurry mixture is then allowed to harden. After the cementing slurry mixture has hardened sufficiently to at least hold the mounting device in place, a furnishing fixture may be permanently affixed to the wall by welding one side of a section of angle iron to the outer surface of one of the plate members and the other side of the angle iron section to the fixture. Although it is possible to utilize a mounting bracket, such as a length of angle iron or other bracket configuration, between the outer surface and the fixture, it is preferred to attach the fixture directly to the outer surface of the metal plate member through welding, or with fasteners such as bolts, security bolts, rivets, conventional interlocking connectors, etc.

When threaded connectors such as security or conventional bolts are used, one of the first and second plates preferably has at least two apertures formed therethrough that are each in connection with an internally threaded, threaded connector engaging cavity. The apertures themselves can be threaded for engagement with a threaded connector or a weld nut can be aligned with each aperture and welded to the first or second plate in a manner such that a threaded connector can engage each of the weld nuts. When this embodiment is used, it is important to provide a covering for the weld nuts prior to pouring the quantity of the cementing slurry mixture into the space between the first and second plate members of the mounting device. The covering is preferably a material that will reserve sufficient space adjacent the weld nut within the space between the first and second plates to allow the threaded connector to be fully tightened. A section of foam type plastic material placed over the nut is preferred, however, a plastic cap adapted to the seal the nut from the cement slurry is also sufficient to practice the invention.

BRIEF DESCRIPTION OF DRAWINGS

For a further understanding of the nature and objects of the present invention, reference should be had to the following detailed description, taken in conjunction with the accompanying drawings, in which like elements are given the same or analogous reference numbers and wherein:

FIG. 1 is a perspective view of an exemplary embodiment of the embeddable mounting device of the present invention.

FIG. 2 is a side view showing one of the space members and two of the vertical reinforcing bars.

FIG. 3 is a bottom view showing the four vertical reinforcing bars, the three vertical spacer members, the two internal concrete cavities and the two side positioned concrete cavities.

FIG. 4 is a side view of the mounting device of FIG. 1 showing two of the vertical reinforcing bars extending above and below the second metal plate member.

FIG. 5 is a perspective detail view of a partially constructed concrete block wall with the mounting device of FIG. 1 in place between two conventional concrete blocks.

FIG. 6 is a detail perspective view of the completely constructed concrete block wall of FIG. 5 with the mounting device of FIG. 1 installed therein.

FIG. 7 is a schematic view of a concrete block wall having two mounting devices installed.

FIG. 8 is a detail perspective view of the concrete block wall of FIG. 6 with a mounting bracket welded thereto.

FIG. 9 is a schematic view of the concrete block wall of FIG. 7 with a bunk bed permanently affixed thereto.

FIG. 10 is a perspective view of a second exemplary embodiment of the embeddable mounting device of the present invention including a pair of threaded-connector receiving apertures formed through a plate member, each threaded-connector receiving aperture having a weld nut aligned therewith and welded into place to the interior wall of the plate member.

EXEMPLARY MODE FOR CARRYING OUT THE INVENTION

FIG. 1 is a perspective view of an exemplary embodiment of the embeddable mounting device of the present invention generally designated by the numeral 10. Mounting device 10 includes a first rectangular metal plate member 12; a second rectangular metal plate member 14; first, second and third vertical spacer members 16, 18, 20; and four vertical reinforcing bars 22, 24, 26, 28. In this embodiment first and second metal plate members 12, 14 are both one-quarter ($\frac{1}{4}$) inch thick mild steel plates having a height "A" of eight and five-eighths ($8\frac{5}{8}$) inches and a width "B" of sixteen and three-quarters ($16\frac{3}{4}$) inches. With reference to FIG. 2, first and second plate members 12, 14 are secured together and spaced a distance "C", between an outwardly facing first outer surface 30 (more clearly shown in FIG. 1) and outwardly facing second outer surface 32 (more clearly shown in FIG. 4), a distance of seven and five-eighths ($7\frac{5}{8}$) inches, by the three vertical spacer members 16, 18, 20 (FIG. 3). Each vertical spacer member 16, 18, 20 is constructed from one-quarter ($\frac{1}{4}$) inch thick mild steel plate having a height of eight and five-eighths ($8\frac{5}{8}$) inches and a width of about nine and one-eighth inches. The shorter height side edges have about a one-quarter inch radius bend located about one inch from, and running parallel to, the shorter eight and five-eighths inch sides. The bends are formed in a manner to form a vertical spacer member 16, 18, 20 having a U-shaped cross section and including, respectively, a central section 16a, 18a, 20a, and a pair of leg sections 16b, 16c; 18b, 18c; 20b, 20c. The edges of leg sections 16b, 16c are aligned with the edges of first and second plate members 12, 14 and welded into place in a manner to form a first end cavity 34. The edges of leg sections 20b, 20c are aligned with the edges of first and second plate members 12, 14 and welded into place in a manner to form an oppositely directed second end cavity 36. When vertical spacer member 18 is installed, first and second reinforcing bar and cement cavities 37, 39 are also formed on either side of vertical spacer member 18.

With reference once again to FIG. 1, the four vertical reinforcing bars 22, 24, 26, 28 are each constructed from about a fifteen and five-eighths ($15\frac{5}{8}$) inch of one-half ($\frac{1}{2}$) inch diameter steel reinforcing bar stock. With reference to FIG. 2, each bar 22, 24, 26, 28 has four forty-five (45°) degree one-half ($\frac{1}{2}$) inch radius bends formed in a manner to create a central section 23a that is offset from the two end sections 23b, 23c. With reference to FIG. 4, each end section 23b, 23c

extends away from mounting device 10 about three (3") inches and, in use, extends into the reinforcing bar and cement receiving cavity of a conventional concrete block

FIG. 5 is a detail perspective view of a partially constructed concrete block wall, generally designated by the numeral 38. Block wall 38 is constructed from a plurality of conventional concrete blocks 40. Each concrete block 40 includes a pair of reinforcing bar and cement receiving cavities 42. A mounting device 10 is shown installed between two concrete blocks 40a,40b and above two concrete blocks 40c,40d.

FIG. 6 is a detail perspective view of a completed wall 38 showing mounting device 10 positioned between two concrete blocks 40a,40b; above two concrete blocks 40c,40d; and below two concrete blocks 40e,40f. As shown in the figure, the perimeter edges of plate member 12 directly contact the edges of the surrounding concrete blocks 40a-40f. FIG. 7 is a schematic view showing a pair of mounting devices 10 installed within representative wall 38.

An exemplary method of installing an embeddable to a wall 38 is now described with general reference to FIGS. 1-4 and particular reference to FIGS. 5-9. With reference to FIG. 5, in the exemplary method of permanently attaching a fixture to a block wall, the method includes the step of installing at least one mounting device 10, as described above, into a block wall 38 in place of one of the concrete blocks 40 during construction. Installation of mounting device 10 is as follows: mounting device 10 is placed into wall 38 in a manner such that the reinforcing bar receiving cavities 37,38 of mounting device 10 are aligned with one reinforcing bar and cement receiving cavity 42 (not shown) each from concrete blocks 40c,40d,40e,40f. With vertical reinforcing bar end sections 23b,23c in place, a cementing slurry mixture is then poured into the aligned reinforcing bar receiving cavities 37,39, and 42 in a manner such that vertical reinforcing bars 22,24,26,28 and a quantity of the cementing slurry mixture fill the aligned reinforcing bar and cement receiving cavities 37,39, of mounting device 10 and the aligned reinforcing bar and cement receiving cavities of concrete blocks 40c,40d,40e,40f. The cementing slurry mixture is then allowed to harden while the wall 38 is fully constructed as shown in FIG. 7.

Once wall 38 is fully constructed, a furnishing fixture, such as a bunk bed assembly 44 (FIG. 9) may be permanently affixed to wall 38 using two brackets 46,48. With reference to FIG. 8, in this exemplary method brackets 46,48 are lengths of angle iron having a first side 50 and a perpendicularly oriented second side 52. Fixture 44 is mounted to plate member 12 by placing fixture 44 against wall 38 in a manner such that a section of fixture 44 is adjacent one of the mounting devices 10. Each first side 50 of each bracket 46,48 is welded to a plate member 12 and each second side 52 is welded to fixture 44. Fixture 44 is now permanently attached. It can be seen that by advantageously positioning, at various heights and various spacings, one or more mounting devices 10 into a wall 38 during construction the method may be utilized to permanently install a variety of fixtures 44 to a block wall 38.

FIG. 10 shows a second exemplary embodiment of the embeddable mounting device of the present invention, generally designated by the designation 10a. In this

embodiment, the four vertical reinforcing bars 22,24,26,28 (FIG. 1) have been omitted and pair of connector receiving apertures 60a,60b have been formed through first plate member 12. A conventional weld nut 62a,62b is aligned with each threaded-connector receiving aperture 60a,60b, respectively, and welded to the interior surface of first plate member 16.

It can be seen from the preceding description that a embeddable mounting device has been provided that is used in connection with a concrete block wall and that does not provide a gap between the concrete block wall and a steel mounting surface when in place; and in a further aspect of the invention a method of permanently mounting a fixture to a concrete block wall has been provided that does not require degrading the wall structure by forming a cavity within the preexisting wall.

It is noted that the embodiment of the embeddable mounting device and method described herein in detail for exemplary purposes are of course subject to many different variations in structure, design, application and methodology. Because many varying and different embodiments may be made within the scope of the inventive concept(s) herein taught, and because many modifications may be made in the embodiment herein detailed in accordance with the descriptive requirements of the law, it is to be understood that the details herein are to be interpreted as illustrative and not in a limiting sense.

What is claimed is:

1. A embeddable mounting device comprising:

a first rectangular metal plate member having a first inner surface, a first outer surface, a first length measuring between fifteen (15") and seventeen (17") inches, a first width measuring between seven (7") and nine (9") inches, and a first thickness;

a second rectangular metal plate member having a second inner surface, a second outer surface, a second length of a measurement equal to said first length, a second width of a measurement equal to said first width, and a second thickness; and

a pair of vertical spacer members secured between said first inner surface and said second inner surface in a manner to form at least one reinforcing bar and cement receiving cavity between said first and second metal plate members, in a manner to hold said first and second metal plate members in parallel relationship with each other such that when said first and second metal plate members simultaneously contact a planar surface said first and second metal plate members are both perpendicularly oriented to said planar surface, and in a manner such that said first and second outer surfaces are spaced apart a spacing distance measuring between seven (7") and eight (8") inches.

2. The embeddable mounting device of claim 1, wherein: said first length is between eight and one-half (8½") and eight and three-quarters (8¾") inches.

3. The embeddable mounting device of claim 1, wherein: said first width is between sixteen and one-half (16½") and seventeen (17") inches.

4. The embeddable mounting device of claim 3 wherein: said mounting device further includes a third vertical spacer member positioned between said first and second vertical spacer members to create a pair of reinforcing bar and cement receiving cavities that are

alignable with said reinforcing bar and cement receiving cavities of conventional concrete blocks.

5. The embeddable mounting device of claim 3 wherein:
a plurality of vertical reinforcing bars are secured to said mounting device in a manner such that, when said mounting device is placed atop a first concrete block having a pair of conventional reinforcing bar and cement receiving cavities and below a second concrete block having a pair of conventional reinforcing bar and cement receiving cavities, a length of each of said plurality of vertical reinforcing bars extends into at least one of said reinforcing bar and cement receiving cavities of each of said first and second cement blocks.
6. The embeddable mounting device of claim 5 wherein:
each of said plurality of vertical reinforcing bars is connected in fixed relationship to said mounting device.
7. The embeddable mounting device of claim 6 wherein:
each of said plurality of vertical reinforcing bars has four bends formed therein in a manner to create a central bar section in each of said plurality of vertical reinforcing bars that is offset from two end sections of each of said plurality of vertical reinforcing bars.
8. The embeddable mounting device of claim 1, wherein:
at least two threaded-connector receiving apertures are provided through one of said first and second plate members.
9. The embeddable mounting device of claim 1, wherein:
said first length is between eight and one-half ($8\frac{1}{2}$ ") and eight and three-quarters ($8\frac{3}{4}$ ") inches; and
said first width is between sixteen and one-half ($16\frac{1}{2}$ ") and seventeen (17") inches.
10. The embeddable mounting device of claim 9 wherein:
said mounting device further includes a third vertical spacer member positioned between said first and second vertical spacer members to create a pair of reinforcing bar and cement receiving cavities that are alignable with said reinforcing bar and cement receiving cavities of conventional concrete blocks.
11. A method of permanently affixing a furnishing fixture to a concrete block wall comprising the steps of:
 - a) providing at least one embeddable mounting device comprising:
 - a first rectangular metal plate member having a first inner surface, a first outer surface, a first length measuring between fifteen (15") and seventeen (17") inches, a first width measuring between seven (7") and nine (9") inches, and a first thickness;
 - a second rectangular metal plate member having a second inner surface, a second outer surface, a second length of a measurement equal to said first length, a second width of a measurement equal to said first width, and a second thickness; and
 - a pair of vertical spacer members secured between said first inner surface and said second inner surface in a manner to form at least one reinforcing bar and cement receiving cavity between said first and second metal plate members, in a manner to hold said first and second metal plate members in parallel relationship with each other such that when said first and second metal plate members simultaneously contact a planar surface said first and second metal plate members are both perpendicularly oriented to said planar surface, and in a manner such that said first and second outer surfaces are spaced apart a spacing distance measuring between seven (7") and eight (8") inches;

- b) installing said mounting device into said concrete block wall in place of a conventional concrete block, said mounting device being placed into said concrete block wall in a manner such that said reinforcing bar receiving cavity of said mounting device is aligned with at least one reinforcing bar receiving cavity of a said concrete block;
- c) providing at least one vertical reinforcing bar that is insertable through one of said reinforcing bar receiving cavities of said concrete block and said reinforcing bar and cement receiving cavity of said mounting device;
- d) inserting said at least one vertical reinforcing bar into one of said reinforcing bar receiving cavities of said concrete block and said reinforcing bar and cement receiving cavity of said mounting device;
- e) providing a cementing slurry;
- f) pouring said cementing slurry into said reinforcing bar receiving cavities of said concrete block and said reinforcing bar and cement receiving cavity of said mounting device;
- g) waiting a period of time sufficient to allow said cementing slurry to harden; and
- h) permanently affixing a fixture to one of said plate members of said mounting device.

12. The method of claim 11 further including the steps of:

- i) providing a fixture mounting bracket; and
- j) permanently securing said fixture mounting bracket between one of said plate members and said fixture.

13. The method of claim 11 wherein:

said mounting device further includes a third vertical spacer member positioned between said first and second vertical spacer members to create a pair of reinforcing bar and cement receiving cavities that are alignable with said reinforcing bar and cement receiving cavities of conventional concrete blocks.

14. The method of claim 11 wherein:

said mounting device further includes a plurality of vertical reinforcing bars secured to said mounting device in a manner such that, when said mounting device is placed atop a first concrete block having a pair of conventional reinforcing bar and cement receiving cavities and below a second concrete block having a pair of conventional reinforcing bar and cement receiving cavities, a length of each of said plurality of vertical reinforcing bars extends into at least one of said reinforcing bar and cement receiving cavities of each of said first and second concrete blocks.

15. The method of claim 14 wherein:

each of said plurality of vertical reinforcing bars is connected in fixed relationship to said mounting device.

16. The method of claim 15 wherein:

each of said plurality of vertical reinforcing bars has four bends formed therein in a manner to create a central bar section in each of said plurality of vertical reinforcing bars that is offset from two end sections of each of said plurality of vertical reinforcing bars.

17. The method of claim 11 wherein:

said mounting device provided further includes:
a third vertical spacer member positioned between said first and second vertical spacer members to create a pair of reinforcing bar and cement receiving cavities that are alignable with said reinforcing bar and cement receiving cavities of conventional concrete blocks; and

a plurality of vertical reinforcing bars secured to said mounting device in a manner such that, when said mounting device is placed atop a first concrete block having a pair of conventional reinforcing bar and cement receiving cavities and below a second concrete block having a pair of conventional reinforcing bar and cement receiving cavities, a length each of said plurality of vertical reinforcing bars extend into at least one of said reinforcing bar and cement receiving cavities of each of said first and second

10

cement blocks, each of said plurality of vertical reinforcing bars being connected in fixed relationship to said mounting device, each of said plurality of vertical reinforcing bars having four bends formed therein in a manner to create a central bar section in each of said plurality of vertical reinforcing bars that offset from two end sections of each of said plurality of vertical reinforcing bars.

ABSTRACT

A embeddable mounting device and method for permanently affixing a fixture to a concrete block wall. The embeddable mounting device comprises a first rectangular metal plate member; a second rectangular metal plate member having dimensions equal to the first metal plate; and a pair of vertical spacer members secured between the first inner surface and the second inner surface in a manner to create at least one reinforcing bar and cement receiving cavity between the first and second metal plate members, and in a manner to hold the first and second metal plate members in parallel relationship with each other such that when said first and second metal plate members simultaneously contact a planar surface the first and second metal plate members are both perpendicularly oriented to the planar surface. A method of installing a fixture utilizing the mounting device is also described.

Applicant or Patentee: Harry R. Layne
Serial or Patent No.: Reissue of 5,649,391
For: EMBEDDABLE MOUNTING DEVICE AND METHOD

Attorney's Docket No.: F0375DT-US
Filed or Issued: Herewith

**VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY
STATUS (37 CFR 1.9(f) AND 1.27(c)) - SMALL BUSINESS CONCERN**

I hereby declare that I am

- ☐ the owner of the small business concern identified below
☒ an official of the small business concern empowered to act on behalf of the concern identified below:
Name of Concern: Steel Block, Inc.
Address of Concern: 11 Wisteria Lane, Covington, LA 70433.

I hereby declare that the above identified small business concern qualifies as a small business concern as defined in 13 CFR §121.3-18, and reproduced in 37 CFR 1.9(d), for purposes of paying reduced fees under Section 41(a) and (b) of Title 35, United States Code, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention entitled EMBEDDABLE MOUNTING DEVICE AND METHOD by inventor Harry R. Layne and described in

- ☒ the reissue specification filed herewith
☐ application Serial No. _____, filed _____
☒ Patent No. 5,649,391, issued July 22, 1997

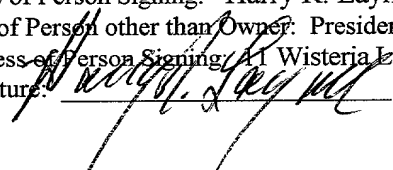
If the rights held by the above identified small business concern are not exclusive, each individual, concern or organization having rights to the invention is listed below* and no rights to the invention are held by any person, other than the inventor, who could not qualify as a small business concern under 37 CFR 1.9(c) or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e). *NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention, averring status as a small entity (37 CFR 1.27)

Full Name: _____
Address: _____

☐ Individual ☐ Small Business Concern ☐ Nonprofit Organization

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

Name of Person Signing: Harry R. Layne
Title of Person other than Owner: President
Address of Person Signing: 11 Wisteria Lane, Covington, LA 70433.
Signature:  Date: Feb-17, 1999

REISSUE DECLARATION BY INVENTOR

I, Harry R. Layne declare that I am a citizen of the United States of America, residing at 11 Wisteria Lane, Covington, LA 70433. I further declare that I am the original, first and sole inventor of the subject matter which is described and claimed in U.S. Patent No. 5,649,391, granted on July 22, 1997, and for which a reissue patent is sought on the invention entitled **EMBEDDABLE MOUNTING DEVICE AND METHOD**, the specification of which is attached hereto and is amended by the preliminary amendment being filed herewith.

I further declare that I have reviewed and understand the content of the above-identified specification, including the claims as amended by the preliminary amendment being filed herewith.

I acknowledge my duty to disclose information of which I am aware which is material to the patentability of this application in accordance with 37 CFR 1.56.

I verily believe the original patent to be wholly or partly inoperative or invalid by reason of the patentee claiming more or less than patentee had a right to claim in the patent.

At least one error upon which reissue is based is described as follows: the issued claims were too narrow in scope and did not capture the complete essence of the invention as described in the specification. Specifically, at least the dimensions recited in independent claims 1 and 11 are believed to be unnecessary. New independent claims 18, 23 and 27 do not require the dimensions recited in independent claims 1 and 11.

I verily believe that all errors corrected in this reissue application up to the time of filing of this oath/declaration arose without any deceptive intention on the part of the applicant.

I further declare that no application for patent or inventor's certificate on this invention has been filed by us or our representatives or assigns in any country foreign to the United States, except as follows: NONE

The undersigned declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Inventor:


Harry R. Layne

Post Office

Address: 11 Wisteria Lane,
Covington, LA 70433

Date:

Feb. 17, 1999

F0375DT-US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : ATTN: Box Reissue
Harry R. Layne : Patent Art Unit: 3621
Patent No.: 5,649,391 : Examiner: W. Glenn Edwards
Issued: July 22, 1997 :
For: **EMBEDDABLE MOUNTING DEVICE** :
AND METHOD :

POWER OF ATTORNEY

Assistant Commissioner of Patents
Box Reissue
Washington, D.C. 20231

Sir:

Steel Block, Inc. is the Assignee of the entire right, title and interest in the above-identified application (see Certificate Under 37 C.F.R. § 3.73(b) submitted herewith), and hereby appoints as patent attorneys and/or patent agents:

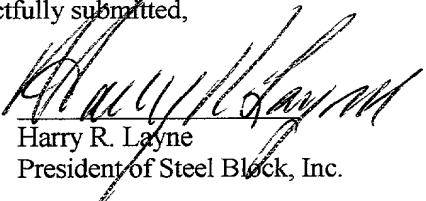
David L. Tarnoff	Reg. No. 32,383	Yoshio Miyagawa	Reg. No. 43,393
John C. Robbins	Reg. No. 34,706	James W. Judge	Reg. No. 42,701
Christopher M. Tanner	Reg. No. 41,518		

of the firm of SHINJYU GLOBAL IP COUNSELORS, LLP as my attorneys or agents with full power of substitution and revocation, to prosecute said application and to transact all business in the Patent and Trademark Office connected therewith.

Correspondence and telephone calls are to be directed to:

SHINJYU GLOBAL IP COUNSELORS, LLP
1233 Twentieth Street, N.W., Suite 700
Washington, D.C. 20036
(202) 293-0444

Respectfully submitted,

By: 
Name: Harry R. Layne
Title: President of Steel Block, Inc.

Date: Feb 17, 1999

F0375DT-US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	:	ATTN: Box Reissue
	:	
Harry R. Layne	:	Patent Art Unit:
	:	
Patent No.: 5,649,391	:	Examiner: W. Glenn Edwards
	:	
Issued: July 22, 1997	:	
	:	
For: EMBEDDABLE MOUNTING DEVICE	:	
AND METHOD	:	

Certificate Under 37 C.F.R. § 3.73(b)

Assistant Commissioner of Patents
Box Reissue
Washington, D.C. 20231

Sir:

Steel Block, Inc., a United States corporation, hereby certifies that it is the assignee of the entire right, title and interest of the above-identified application by virtue of the chain of title from the inventor of the above-identified application to the current assignee as shown by the attached assignments which were filed with the U.S. Patent and Trademark Office on October 26, 1998.

Chain of Title shown by the attached documents:

From: Harry R. Layne
To: Steel Block, Inc.

The undersigned has reviewed the attached documents in the chain of title of the patent application identified above and, to the best of the undersigned's knowledge and belief, title is in the assignee identified above. The undersigned is empowered to act on behalf of assignee.

The undersigned declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Respectfully submitted,

By:

Name: Harry R. Layne

Title: President of Steel Block, Inc.

Dated: Feb. 17, 1999

F0375DT-US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	:	ATTN: Box Reissue
Harry R. Layne	:	Patent Art Unit: 3621
Patent No.: 5,649,391	:	Examiner: W. Glenn Edwards
Issued: July 22, 1997	:	
For: EMBEDDABLE MOUNTING DEVICE	:	
AND METHOD	:	

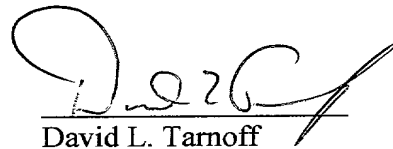
**REQUEST FOR TRANSFER OF DRAWINGS FROM THE
FILE OF THE ORIGINAL PATENT TO REISSUE APPLICATION**

Assistant Commissioner of Patents
Box Reissue
Washington, D.C. 20231

Sir:

No drawing changes are being made to the original drawings. Therefore, please transfer the drawings from the file of the original U.S. Patent No. 5,649,391, filed on February 23, 1996, for the invention entitled **EMBEDDABLE MOUNTING DEVICE AND METHOD** to the reissue application, the specification of which is attached hereto.

Respectfully submitted,



David L. Tarnoff
Attorney of Record
on Behalf of Assignee
Reg. No. 32,383

SHINJYU GLOBAL IP COUNSELORS, L.L.P.
1233 Twentieth Street, N.W., Suite 700
Washington, D.C. 20036
(202) 293-0444
Dated: February 25, 1999

FIG. 1

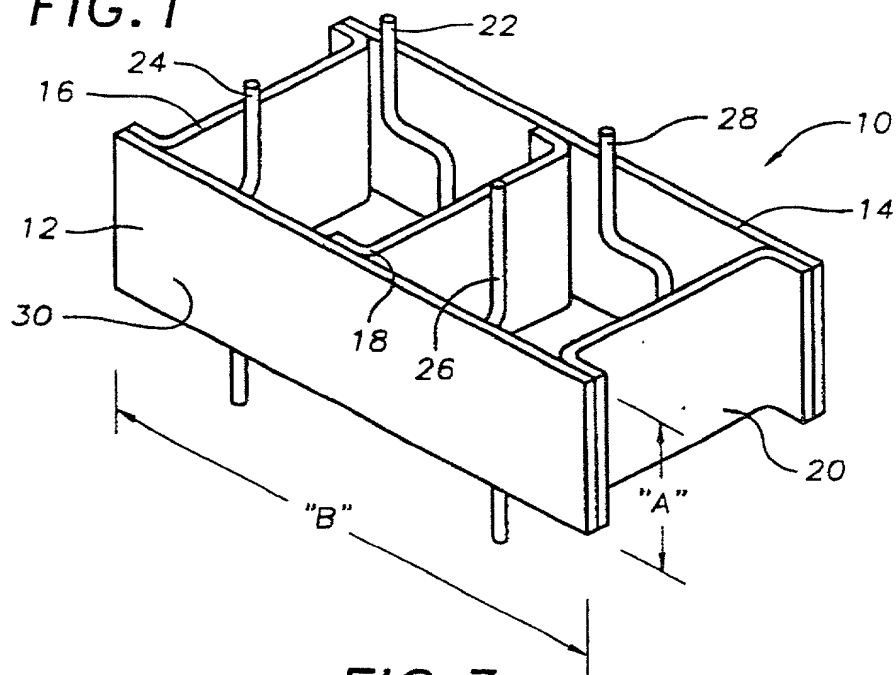


FIG. 2

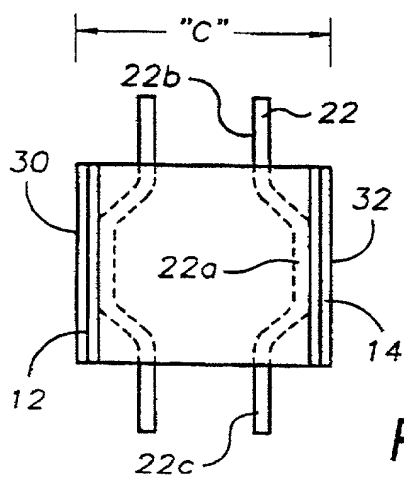


FIG. 3

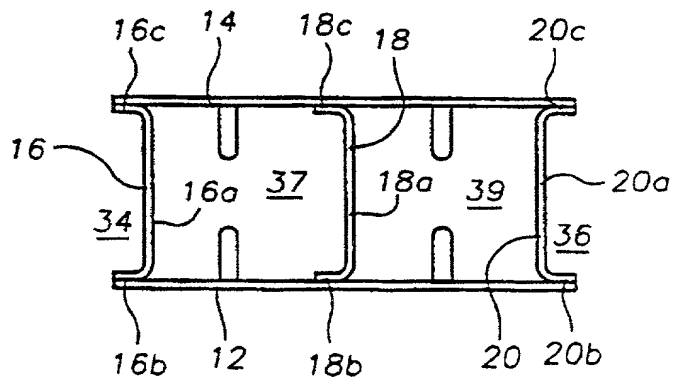


FIG. 4

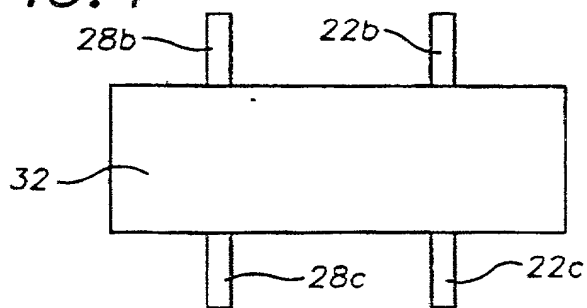


FIG. 5

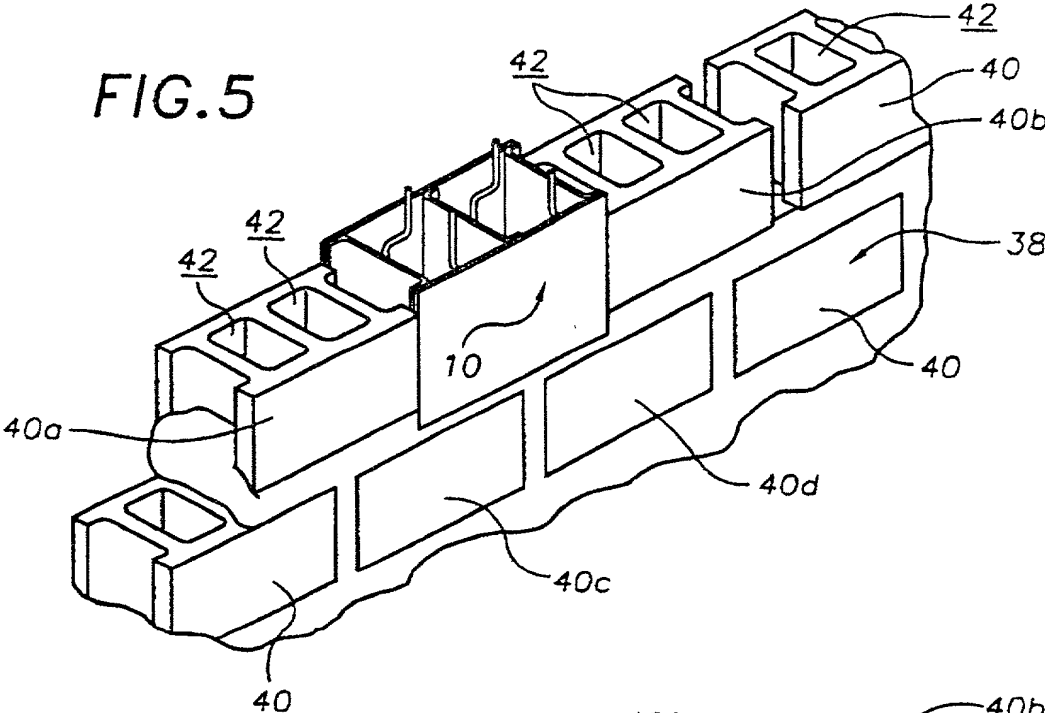


FIG. 6

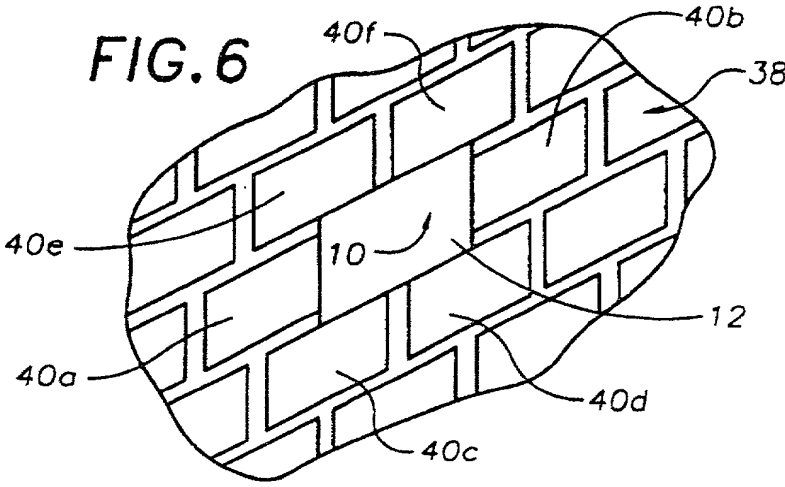


FIG. 7

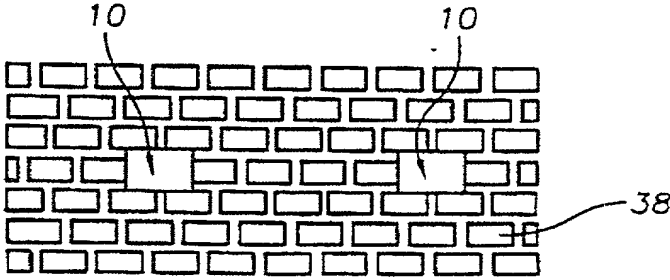


FIG. 8

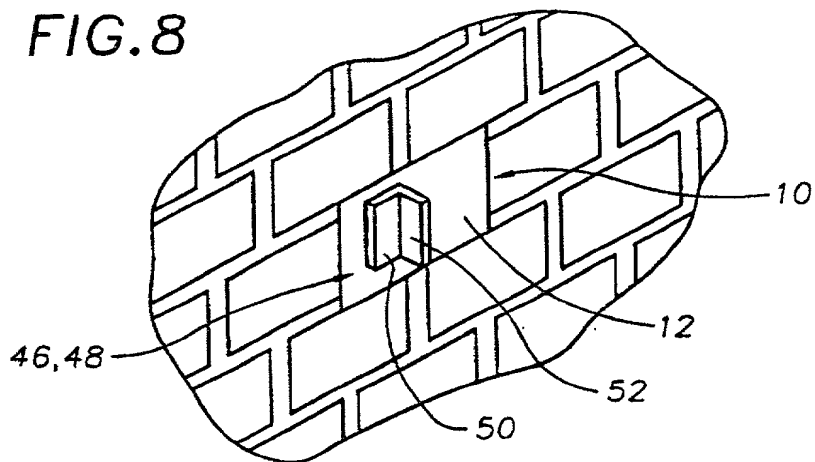


FIG. 9

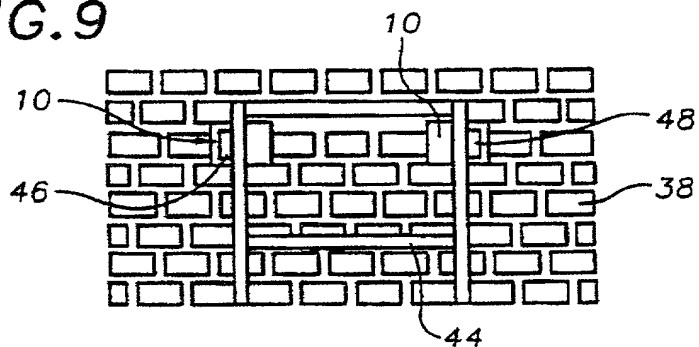


FIG. 10

